PEACE/WILLISTON
FISH & WILDLIFE
COMPENSATION
PROGRAM

BCHydro

BRITISH
COLUMBIA

Wildlife Program
Annual Report 1995/96

M. D. Wood and F. B. Corbould
November 1996

PWFWCP Report No. 55

105-00934/

The Peace/Williston Fish & Wildlife Compensation Program is a cooperative venture of BC Hydro and the provincial fish and wildlife management agencies, supported by funding from BC Hydro. The Program was established to enhance and protect fish and wildlife resources affected by the construction of the W.A.C. Bennett and Peace Canyon dams on the Peace River, and the subsequent creation of the Williston and Dinosaur Reservoirs.

Peace/Williston Fish and Wildlife Compensation Program, 1011 Fourth Ave. 3rd Floor, Prince George B.C. V2L 3H9

Website: *www.bchydro.bc.ca/environment/initiatives/pwcp/*

This report has been approved by the Peace/Williston Fish and Wildlife Compensation Program Fish Technical Committee.

Citation: M. D. Wood and F. B. Corbould. November 1996. Wildlife Program Annual Report 1995/96. Peace/Williston Fish and Wildlife Compensation Program, Report No. 55. 12pp plus appendices.

Author(s): Mari D. Wood[1] and Fraser B. Corbould[1]
Address(es): [1] Peace/Williston Fish and Wildlife Compensation Program, 1011 Fourth Ave., 3rd Floor Prince George, B.C. V2L 3H9

PEACE/WILLISTON FISH AND WILDLIFE COMPENSATION PROGRAM

WILDLIFE PROGRAM ANNUAL REPORT 1995/96

STEERING COMMITTEE MEMBERS:

Ted Down (B.C. Environment)
Ron Fernandes (B.C. Hydro)
Colin Gurnsey (B.C. Hydro)
Al Sanderson (B.C. Environment)

TECHNICAL COMMITTEE MEMBERS:

Alan Chan-McLeod (B.C. Hydro)
John Elliott (B.C. Environment)
Doug Heard (B.C. Environment)
Ed Hill (B.C. Hydro)

PROGRAM WILDLIFE BIOLOGISTS:

Mari Wood (B.C. Hydro)
Fraser Corbould (B.C. Hydro)

PROGRAMADMINISTRATION

Mari Wood and Fraser Corbould continued as full-time wildlife biologists responsible for administering, managing and conducting research and enhancement projects within the Wildlife Section of the Peace/Williston Fish & Wildlife Compensation Program (PWFWCP) in 1995/96. Fraser Corbould obtained his permanent employment status with B.C. Hydro in the spring of 1995. Various consulting firms, contractors and individuals were employed to undertake work on a variety of projects. The Technical Committee membership experienced another change this year, with Ed Hill replacing Bob Bradley from B.C. Hydro. The Steering Committee also underwent a change in representation of their B.C. Hydro members with Ron Fernandes, GMS Area Manager, and Colin Gurnsey, Environmental Services Manager, replacing Nigel Grant and Zig Hathorn.

Administrative activities of the Program biologists included preparation of the 1994/95 Annual Report (Corbould and Wood, 1995) and the 1995/96 quarterly reports, project accounting, and contract management. A new logo for the PWFWCP was developed and report covers with the new logo were produced. All Wildlife Program reports were bound with the new covers and placed into a numbered report series (Appendix A).

PROGRAM PLANNING

Two Technical Committee meetings and two conference calls were held to discuss the current years' projects and finances, and prepare a budget for the 1996/97 Wildlife Program which was submitted to the Steering Committee for approval. Funding proposals were prepared and submitted to the Habitat Conservation Fund and Forest Renewal B.C. for financial assistance with the Fisher Habitat Use, Ingenika Prescribed Burn, and Donna Creek Biodiversity Projects for 1996/97. A summary of 1995/96 Wildlife Program projects was presented to members of the Steering Committee.

The logistics and co-ordination of current and future projects were also discussed with co-operative agencies including: Neilson Lake Wetland Enhancement Project (Ducks Unlimited); Fisher Habitat Use Project (BC Environment); Reservoir Raptor Project (BC Hydro); Mackenzie Forest District Prescribed Burning (BC Forest Service); and Mackenzie Migratory Songbird Project (Canadian Wildlife Service, TimberWest, Mackenzie Fish and Game Association). Discussions were held with a representative of the Salteau First Nations regarding potential co-operative opportunities for wildlife research/enhancement, and informal meetings were held with individuals/consultants to discuss on-going and potential future projects.

PUBLIC CONSULTATION

A. PRESENTATIONS AND MEETINGS

A display on the PWFWCP Wildlife Program was prepared and exhibited at the Northern Forest Products Association convention in Prince George. A poster-board display on the Donna Creek Cavity Nester Project was prepared and presented at both the Ecosystem Management Symposium in Prince George, and the Stand Level Biodiversity Symposium in Victoria. A display, with photos and accompanying explanatory text detailing the Wildlife Program's activities, was prepared and provided to Hydro's External Affairs Co-ordinator for permanent exhibition at the GMS Tourism Centre. The Wildlife Program and specific projects were discussed through informal meetings and talks with local native bands, industry, club members, guide-outfitters, trappers, contractors, students and tourists.

B. NATURELINE/INFORMATION DISSEMINATION

NatureLine No. 7 (a special fisheries edition) was prepared and distributed to community leaders, interest groups and the public in the winter of 1995/96. An article prepared on the Omineca Mountains Caribou project appeared in the November issue of Hydro's Access magazine. Two press releases were prepared and distributed to provincial newspapers on the Ingenika River elk transplant: one prior to the transplant, and one upon completion. Details of the transplant were also provided to B.C. Outdoors and the Rocky Mountain Elk Foundation for inclusion in magazine articles. An article on the Neilson Lake wetlands enhancement project appeared in the local newspaper *P.G. This Week* in September. Information and photos were provided to BCH External Relations for inclusion in BCH's new internet site and the 1995/96 Environment Annual Report. Project information and reports were also discussed and provided to numerous consultants, interest groups and individuals, including biologists and researchers throughout Western Canada.

PROJECT SUMMARIES

PROJECT	TYPE	LOCATION
PWFWCP PROJECTS:		
1. Fisher Habitat Use Project	Inventory	Omineca
2. Omineca Mountains Caribou Project	Inventory	Omineca
3. Reservoir Raptor Project	Inventory	Reservoir perimeter
4. Parsnip Ungulate Inventory	Inventory	E. side of Reservoir
5. Winter Range Prescribed Burning	Enhancement	Peace//Finlay
6. Neilson Lake Wetlands Enhancements	Enhancement	Parsnip
7. Foreshore Prescribed Burning	Enhancement	Mackenzie
8. Ingenika River Elk Transplant	Enhancement	Finlay
9. Donna Creek Forestry/Biodiversity Project	Monitoring	Omineca
10. Mt. Frank Roy Stone's Sheep Transplant	Monitoring	Peace
CO-OPERATIVE PROJECTS:*		
11. Lichen Succession Study	Inventory	Omineca
12. Wolverine Ecology Research	Inventory	Omineca
13. Mackenzie Migratory Bird Monitoring	Inventory	Mackenzie
14. Omineca Caribou/Wolf Interactions	Inventory	Omineca
15. Anzac Moose Enhance (Diversionary Feeding)	Enhancement	Parsnip

* "Co-operative Projects" are administered by other agencies. PWFWCP co-operates on these projects by contributing a limited amount funding and/or technical expertise.

Abbreviations used for Agencies/Clubs:

BCE: B.C. Environment
CWS: Canadian Wildlife Service
DU: Ducks Unlimited
FFI: Finlay Forest Industries
FRBC: Forest Renewal B.C.
HCF: Habitat Conservation Fund
MFGC: Mackenzie Fish and Game Club
MOF: Ministry of Forests
PWFWCP: Peace/Williston Fish & Wildlife Compensation Program
RMEF: Rocky Mountain Elk Foundation
SCWA: Spruce City Wildlife Association
TW: TimberWest Ltd.
UNBC: University of Northern B.C.

INVENTORY/ASSESSMENT PROJECTS

1. FISHER HABITAT USE PROJECT

Objective: To obtain a better understanding of fisher ecology and population dynamics in the northern boreal forest in order to design and implement future enhancement and protection activities. [PWFWCP, FRBC, BCE, TW, FFI]

95/96: In accordance with the Williston watershed Upland Furbearer Problem Analysis (Becker, 1992), a project to address fishers was initiated with the preparation of a detailed working plan. A proposal for additional project funding was submitted and accepted by Forest Renewal B.C. for the 1996/97 fiscal.

2. OMINECA MOUNTAINS CARIBOU PROJECT

Objectives: To determine seasonal habitat use and movements of woodland caribou on the west side of the Williston Reservoir, and to protect caribou and caribou habitat through 1) the development of a caribou/forest harvesting strategy, 2) input to the Mackenzie LRMP table, and 3) input to the Protected Areas initiative.

95/96:. Fixed-wing telemetry flights to determine seasonal habitat use and movements of radio-collared caribou were conducted weekly during spring migration and early winter periods, and monthly/bimonthly throughout the remainder of the year. In addition, some groundwork was conducted in forested habitats to determine caribou use and primary forage species. The key alpine winter range for the Wolverine Herd was surveyed to estimate the population size and structure. Information, input and direction was provided to BCE habitat staff to aid in the development of a caribou management plan for the Mackenzie TSA, and input was provided to the Regional Protected Areas Team (RPAT) regarding the Omineca and Carina/Tomias candidate Protected Areas.

3. RESERVOIR RAPTOR PROJECT

Objectives: To determine the population status and nesting distribution of bald eagles and osprey around the Williston and Dinosaur Reservoirs and their major tributary systems, and to identify, design and implement enhancement projects if necessary that will address these species.

95/96: A survey of the entire perimeter of the Williston and Dinosaur Reservoirs was conducted in March 1995 (previous fiscal) to determine locations of eagle and osprey nests. Breeding (May) and fledgling (July) aerial surveys were conducted to determine the proportion of available nests used, fledgling success and population size of bald eagles and ospreys around the reservoirs. A database was created, and the distribution of eagles, ospreys, nests and potential nest sites were mapped using QuikMap, a computer mapping program.

4. PARSNIP UNGULATE INVENTORY

Objective: To survey high elevation mountain ranges and record population size, structure and distribution of wintering ungulates, and to provide data and recommendations to BCE habitat managers dealing with forest harvesting, mining and access issues in the area.

95/96: A two-day inventory of high elevation alpine ungulate winter ranges was conducted in March along the east side of the Williston Reservoir from the Peace Arm south to Highway 97 (just south of Mackenzie).

ENHANCEMENT PROJECTS

5. WINTER RANGE PRESCRIBED BURNING

Objectives: To enhance forage for ungulates and bears, and to provide foraging and breeding habitat for many wildlife species that require early successional stages.

95/96: Prescribed burning was conducted on the south-facing deciduous slopes of Branham Slide, on the north side of the Peace Arm in May. Weather conditions were good, and about 500-700 hectares of the 1000 hectare targeted area burned.

6. NEILSON LAKE WETLANDS ENHANCEMENT

Objectives: To enhance the Neilson Lake wetland area (adjacent to Summit Lake) for waterfowl and aquatic furbearers by providing stable water levels and increasing waterfowl breeding and rearing habitat. [PWFWCP, DU]

95/96: In September, a steel weir was constructed at Neilson Lake to stabilize water levels and provide a means of manipulating the water level to best benefit waterfowl and aquatic furbearers. Ducks Unlimited provided an engineering technician to direct the weir construction and supervise the contractors. A Section 12 Map Reserve (special wildlife management) for Neilson Lake and the surrounding area, was applied for and received. Two floating islands and four nestboxes were installed in the area, and a project sign was erected.

7. FORESHORE PRESCRIBED BURNING

Objective: To increase the quality and availability of forage for migrating and resident waterfowl along the Reservoir foreshore. [PWFWCP, MFGC]

95/96: Prescribed burning of the foreshore area around the Mischinsinlika River south of Mackenzie, was conducted in May 1995. Mackenzie Fish & Game Club volunteers assisted with re-establishing the firebreaks originally created in 1994, and controlling and mopping up the fire. The fire was ignited with drip torches, and resulted in 64 hectares of matted grass being burned.

8. INGENIKA RIVER ELK TRANSPLANT

Objective: To supplement the small existing herd of elk in the Ingenika River drainage and establish a viable population of elk in the area. [PWFWCP, RMEF]

95/96: In February 1996, 50 Rocky Mountain elk were captured in Groundbirch, east of Chetwynd, and transplanted to the Ingenika River at the north end of the Williston Reservoir. The elk were captured in a large baited corral trap, transported to the site in a livestock hauling truck, and released on the aspen sidehills above the Ingenika River. Ten females were radio-collared to monitor survival and dispersal of the transplanted elk.

MONITORING/EVALUATION PROJECTS

9. DONNA CREEK FORESTRY/BIODIVERSITY PROJECT

Objective: To develop and test alternative forest harvesting techniques designed to benefit cavity-dependent birds and mammals. [PWFWCP, TW, HCF]

95/96: Spring breeding bird surveys were conducted by contractors; the data were analyzed and two reports prepared. Winter furbearer surveys were attempted by contractors. Proposals for additional funding were submitted to HCF and FRBC for the 1996/97 fiscal; funding was received only from HCF.

10. MT. FRANK ROY STONE'S SHEEP TRANSPLANT

Objective: To establish a viable population of Stone's sheep on historical range south of the Peace Arm of the Williston Reservoir.

95/96: A winter survey of mountain ranges south of the Reservoir was conducted to monitor the status of the transplanted Stone's sheep herd, and to determine the population size, structure and distribution of wintering caribou.

CO-OPERATIVE PROJECTS:

* These projects are administered by other agencies. PWFWCP co-operates on these projects by contributing a limited amount funding and/or technical expertise.

11. LICHEN SUCCESSION STUDY

Objective: To determine the patterns of succession of terrestrial lichens throughout the BWBS zone in relation to site, soil and forest stand characteristics. [UNBC, FRBC, BCE, MOF, PWFWCP]

95/96: The PWFWCP assisted UNBC staff with the selection of study sites in various lodgepole pine stands in the Omineca River/Germansen Lake area. Preliminary lichen plots were established by a graduate student from UNBC.

12. WOLVERINE ECOLOGY RESEARCH

Objectives: To determine the seasonal habitat use, movements, and population characteristics of wolverine in the northern boreal forest, and to direct future enhancement and protection activities with a better understanding of wolverine ecology. [BCE, FRBC, TW, FFI, PWFWCP]

95/96: Over the winter of 95/96, traps were constructed, baited, and set throughout the Wolverine Range/Omineca River valley by BCE staff and contractors. Eleven wolverines were captured and radio-collared. The PWFWCP assisted with the checking of baited traps, and with radio-tracking of collared wolverines while on tracking flights for collared caribou in the same area (project #2). BCE submitted a proposal for continued funding from FRBC for 96/97.

13. MACKENZIE MIGRATORY SONGBIRD MONITORING

Objectives: To determine the population status and trends of neotropical migratory songbird populations in the northern Rocky Mountain Trench , and to identify those species that may be at risk from habitat loss and degradation. This is a long-term initiative of the Canadian Wildlife Service to monitor trends of songbird populations throughout North America. [CWS, MFGC, TW, FFI, PWFWCP]

95/96: Two banding stations were established near Mackenzie, and two master banders were contracted. Throughout the fall migration period (August and September, birds were captured in mist-nets, banded, and released. The master banders were assisted by volunteers from the Mackenzie Fish and Game Club on a regular basis. The PWFWCP hired one of the master banders for the season, and assisted with banding for a short period.

14. OMINECA CARIBOU/WOLF INTERACTIONS

Objectives: To determine the specific habitat use of caribou through the use of GPS satellite-type collars, and to determine interspecific interactions between wolves and caribou. [BCE, UNBC, FRBC, TW, FFI, PWFWCP]

95/96: Over the winter of 95/96, six caribou were captured and fitted with Global Positioning System collars to enable intensive monitoring of caribou movements. A UNBC graduate student was selected to conduct the study of caribou movements. Four wolves were also captured: two were fitted with satellite collars, and two with conventional radio-collars. The PWFWCP assisted with the capture of the animals, and with radio-tracking of the wolves during tracking flights for collared caribou in the same area (project #2).

15. ANZAC MOOSE ENHANCEMENT

Objective: To enhance moose populations in the Parsnip drainage by limiting bear predation on newborn moose calves. [BCE, HCF, PWFWCP]

95/96: In spring, bait stations consisting of road-killed moose and deer, and coarse fish species, were established to divert predators away from moose calving areas. Radio-collared cow moose were monitored throughout the spring and winter to identify calving sites and determine calf survival. The collection of road/train killed moose and deer over the winter was organized by the Spruce City Wildlife Association (SCWA) in Prince George. Carcasses were kept frozen in SCWA freezer units until spring. The PWFWCP assisted with collection of coarse fish, and monitoring of collared moose in spring. The PWFWCP also purchased large pails for the coarse fish collection.

FINANCIAL SUMMARY

Wildlife Program expenditures during the 1995/96 fiscal totalled $379,510 of which 78% ($294,248) was used to conduct wildlife research and enhancement projects, while 22% ($85,260) covered administrative, planning and public consultation costs (Figure 1).

Figure 1. Wildlife Program expenditures for the 1995/96 fiscal year.

Monies expended within the six cost categories were different than originally budgeted due to the cancellation of some projects, and addition of others (Table 1). The following projects were cancelled in the 1995/96 fiscal year:

- Stakeholder/Public meetings - time constraints for Public Relations staff
- Bevel Prescribed Burn - objections to burning were received from stakeholder
- Bevel Burn Vegetation Monitoring - burn was cancelled, therefore no vegetation assessments were conducted
- Bevel Elk Transplant Assessment - assessment was postponed until area is burned
- Parsnip Rail Line Forage Enhancement - project determined to be not practical, or financially economical
- Tutu/Mugaha Aspen Girdling - project determined to be not practical, or financially economical
- Effects on Non-Target Species - reviewed the working plan, no project required

The available staff time and funds remaining from the cancellation of projects enabled the following additional projects to be completed during the 95/96 fiscal:

- Parsnip Ungulate Inventory
- Branham Slide Prescribed Burn
- Ingenika Elk Transplant
- GIS Mapping of Prescribed Burns

In addition, a small proportion of staff time was allocated to provide technical support to three additional co-operative projects in the Williston Watershed: Omineca Lichen Study (UNBC), Omineca Wolverine Ecology Study (BCE, Victoria), and GPS Caribou/Wolf Study (BCE, Prince George).

Table 1. Detailed budget expenditures for the 1995/96 fiscal.

COST CATEGORY	SPECIFIC PROJECT	PROJECT COSTS	TOTAL EXPENDED	% Expended	% Budgeted
Administration[1]			$41,425	10.9%	14.6%
Planning[2]			$22,758	6.0%	5.0%
Public Consultation[3]			$21,077	5.5%	7.1%
Inventory/ Assessment	Omineca Caribou	$50,640			
	Reservoir Raptor	$36,642			
	Fisher Project	$7,363			
	Parsnip Ungulate Survey	$12,688			
	Habitat Mapping	$3,263			
	Mackenzie Migratory Bird (co-op)	$12,692			
	Other Co-operative Projects	$3,529			
	Other	$2,084	$128,901	34.0%	32.5%
Enhancement/ Protection	Neilson Lake Wetlands	$33,727			
	Foreshore Burning	$6,955			
	Ingenika Elk Transplant	$35,768			
	Forage Enhancement - Finlay	$10,526			
	Forage Enhancement - Peace	$14,893			
	Anzac Moose Enhance (co-op)	$11,445			
	Other	$2,033	$115,347	30.4%	26.6%
Evaluation/ Monitoring	Donna Cr. Forestry/Biodiversity	$39,356			
	Frank Roy Sheep Transplant	$8,312			
	Forage Enhancement	$1,635			
	Other	$697	$50,000	13.2%	14.1%
TOTAL			**$379,510**	**100%**	**100%**

1. Administration: staff wages, office rent, BCE administrative support, office supplies, vehicle costs
2. Panning: staff wages & travel, Technical Committee travel, vehicle costs
3. Public Consultation: staff wages & travel, *NatureLine* production, supplies, services, vehicle costs